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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: ROSEN et al.

Application Serial No.: to be assigned

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For: ALBUMIN FUSION PROTEINS

Attorney Docket No.: PF547

STATEMENT UNDER 37 C.F.R. 1.821(f)

Commissioner For Patents
Washington, D.C. 20231

Sir:

Applicants hereby certify that the enclosed paper copy of the sequence listing and the computer-readable form of such sequence listing are identical.

Respectfully submitted,

Dated: April 12, 2001

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Enclosure
MMW/ts

SEQUENCE LISTING

<110> Rosen, Craig A.
Haseltine, William A.

<120> Albumin Fusion Proteins

<130> PF547

<140> Unassigned

<141> 2001-04-12

<150> 60/229,358

<151> 2000-04-12

<150> 60/256,931

<151> 2000-12-21

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 1 5 10 15
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 Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Glu
 20 25 30
 cag tgt cca ttt gaa gat cat gta aaa tta gtg aat gaa gta act gaa 144
 Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
 35 40 45
 ttt gca aaa aca tgt gtt gct gat gag tca gct gaa aat tgt gac aaa 192
 Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
 50 55 60
 tca ctt cat acc ctt ttt gga gac aaa tta tgc aca gtt gca act ctt 240
 Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
 65 70 75 80
 cgt gaa acc tat ggt gaa atg gct gac tgc tgt gca aaa caa gaa cct 288
 Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
 85 90 95
 gag aga aat gaa tgc ttc ttg caa cac aaa gat gac aac cca aac ctc 336
 Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
 100 105 110
 ccc cga ttg gtg aga cca gag gtt gat gtg atg tgc act gct ttt cat 384
 Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
 115 120 125

gac aat gaa gag aca ttt ttg aaa aaa tac tta tat gaa att gcc aga Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg 130 135 140	432
aga cat cct tac ttt tat gcc ccg gaa ctc ctt ttc ttt gct aaa agg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg 145 150 155 160	480
tat aaa gct gct ttt aca gaa tgt tgc caa gct gct gat aaa gct gcc Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala 165 170 175	528
tgc ctg ttg cca aag ctc gat gaa ctt cgg gat gaa ggg aag gct tcg Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser 180 185 190	576
tct gcc aaa cag aga ctc aaa tgt gcc agt ctc caa aaa ttt gga gaa Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu 195 200 205	624
aga gct ttc aaa gca tgg gca gtg gct cgc ctg agc cag aga ttt ccc Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro 210 215 220	672
aaa gct gag ttt gca gaa gtt tcc aag tta gtg aca gat ctt acc aaa Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys 225 230 235 240	720
gtc cac acg gaa tgc tgc cat gga gat ctg ctt gaa tgt gct gat gac Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp 245 250 255	768
agg gcg gac ctt gcc aag tat atc tgt gaa aat cag gat tcg atc tcc Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser 260 265 270	816
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tgc att gcc gaa gtg gaa aat gat gag atg cct gct gac ttg cct tca Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser 290 295 300	912
tta gct gct gat ttt gtt gaa agt aag gat gtt tgc aaa aac tat gct Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala 305 310 315 320	960
gag gca aag gat gtc ttc ctg ggc atg ttt ttg tat gaa tat gca aga Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg 325 330 335	1008
agg cat cct gat tac tct gtc gtg ctg ctg ctg aga ctt gcc aag aca Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr 340 345 350	1056
tat gaa acc act cta gag aag tgc tgt gcc gct gca gat cct cat gaa Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu 355 360 365	1104

tgc tat gcc aaa gtg ttc gat gaa ttt aaa cct ctt gtg gaa gag cct Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro 370 375 380	1152
cag aat tta atc aaa caa aac tgt gag ctt ttt gag cag ctt gga gag Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu 385 390 395 400	1200
tac aaa ttc cag aat gcg cta tta gtt cgt tac acc aag aaa gta ccc Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro 405 410 415	1248
caa gtg tca act cca act ctt gta gag gtc tca aga aac cta gga aaa Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys 420 425 430	1296
gtg ggc agc aaa tgt tgt aaa cat cct gaa gca aaa aga atg ccc tgt Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys 435 440 445	1344
gca gaa gac tat cta tcc gtg gtc ctg aac cag tta tgt gtg ttg cat Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His 450 455 460	1392
gag aaa acg cca gta agt gac aga gtc aca aaa tgc tgc aca gag tcc Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser 465 470 475 480	1440
ttg gtg aac agg cga cca tgc ttt tca gct ctg gaa gtc gat gaa aca Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr 485 490 495	1488
tac gtt ccc aaa gag ttt aat gct gaa aca ttc acc ttc cat gca gat Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp 500 505 510	1536
ata tgc aca ctt tct gag aag gag aga caa atc aag aaa caa act gca Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala 515 520 525	1584
ctt gtt gag ctt gtg aaa cac aag ccc aag gca aca aaa gag caa ctg Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu 530 535 540	1632
aaa gct gtt atg gat gat ttc gca gct ttt gta gag aag tgc tgc aag Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys 545 550 555 560	1680
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<212> PRT

<213> Homo Sapiens

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Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
35 40 45
Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
50 55 60
Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
65 70 75 80
Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
85 90 95
Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
100 105 110
Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
115 120 125
Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
130 135 140
Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
145 150 155 160
Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
165 170 175
Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
180 185 190
Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
195 200 205
Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
210 215 220
Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
225 230 235 240
Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
245 250 255
Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
260 265 270
Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
275 280 285
Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
290 295 300

Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
 305 310 315 320
 Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
 325 330 335
 Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
 340 345 350
 Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
 355 360 365
 Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro
 370 375 380
 Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu
 385 390 395 400
 Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro
 405 410 415
 Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys
 420 425 430
 Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys
 435 440 445
 Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His
 450 455 460
 Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser
 465 470 475 480
 Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr
 485 490 495
 Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp
 500 505 510
 Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala
 515 520 525
 Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu
 530 535 540
 Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys
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<223> primer used to generate XhoI and ClaI
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<210> 20

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> primer used in generation XhoI and ClaI
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<210> 21

<211> 24

<212> DNA

<213> Artificial Sequence

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<211> 29

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<213> Artificial Sequence

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<211> 51

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<223> reverse primer useful for generation of albumin fusion protein in which the albumin moiety is N-terminal of the Therapeutic Protein

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<210> 27
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protein in which the albumin moiety is c-terminal of the
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52

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Tyr Ser Arg Ser Leu Asp Lys Arg
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tttagctcgg ctactcgcg ggtgtgtgtt cgtcgagatg cacacaagag tgag      114

<210> 31
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
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<223> reverse primer useful for generation of
PC4:HSA albumin fusion VECTOR

<220>
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<222> (6)..(11)
<223> Asp718 restriction site

<220>
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<222> (12)..(17)
<223> EcoRI restriction site

<220>
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<222> (15)..(17)
<223> reverse complement of stop codon

<220>
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<222> (18)..(25)
<223> AscI restriction site

<220>
<221> misc_feature
<222> (18)..(43)
<223> reverse complement of DNA sequence encoding last 9 amino acids

<400> 31
gcagcgggtac cgaattcggc gcgccttata agcctaaggc agc      43

<210> 32

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<211> 46
 <212> DNA
 <213> Artificial Sequence

 <220>
 <221> primer_bind
 <223> forward primer useful for inserting Therapeutic
 protein into pC4:HSA vector

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 <222> (29)
 <223> n equals a,t,g, or c

 <220>
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 <220>
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<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (52)

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<220>

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<222> (53)

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<220>

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<222> (55)

<223> n equals a,t,g, or c

<400> 33

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<210> 34

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<221> signal

<223> Stanniocalcin signal peptide

<400> 34

Met	Leu	Gln	Asn	Ser	Ala	Val	Leu	Leu	Leu	Leu	Val	Ile	Ser	Ala	Ser
1				5					10					15	

Ala

<210> 35

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<221> signal

<223> Synthetic signal peptide

<400> 35

Met	Pro	Thr	Trp	Ala	Trp	Trp	Leu	Phe	Leu	Val	Leu	Leu	Leu	Ala	Leu
1				5					10					15	

Trp	Ala	Pro	Ala	Arg	Gly
				20	

<210> 36

<211> 23

<212> DNA

<213> Artificial Sequence

<220>
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 <223>Degenerate VH forward primer useful for
 amplifying human VH domains

<400> 36
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23

<210> 37
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<220>
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<400> 37
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<210> 38
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<220>
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<400> 38
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<210> 39
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<400> 39
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<210> 40
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<400> 40
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<210> 41
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amplifying human VH domains

<400> 41
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<210> 42
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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<223>Degenerate JH reverse primer useful for
amplifying human VH domains

<400> 42
tgaggagacg gtgaccaggg tgcc

24

<210> 43
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<221>primer_bind
<223>Degenerate JH reverse primer useful for
amplifying human VH domains

<400> 43
tgaagagacg gtgaccattg tccc

24

<210> 44
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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amplifying human VH domains

<400> 44
tgaggagacg gtgaccaggg ttcc

24

<210> 45
<211> 24
<212> DNA
<213> Artificial Sequence

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amplifying human VH domains

<400> 45
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24

<210> 46
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<212> DNA
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<220>
<221>primer_bind
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<400> 46
gacatccaga tgaccacgac tcc

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<210> 47
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
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<223>Degenerate Vkappa forward primer useful for
amplifying human VL domains

<400> 47
gatgttgtga tgactcagtc tcc

23

<210> 48
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
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<223>Degenerate Vkappa forward primer useful for
amplifying human VL domains

<400> 48
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23

<210> 49
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<220>
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<400> 49
gaaattgtgt tgacgcagtc tcc

23

<210> 50
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<210> 51
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23

<210> 52
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<220>
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amplifying human VL domains

<400> 52
gaaattgtgc tgactcagtc tcc

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<210> 53
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
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amplifying human VL domains

<400> 53
cagtctgtgt tgacgcagcc gcc

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<210> 54
<211> 23
<212> DNA
<213> Artificial Sequence

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<223>Degenerate Vlambda forward primer useful for
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<400> 54
cagtcgtgcc tgactcagcc tgc 23

<210> 55
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<212> DNA
<213> Artificial Sequence

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amplifying human VL domains

<400> 55
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<210> 56
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<213> Artificial Sequence

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<400> 56
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<210> 57
<211> 23
<212> DNA
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<220>
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<400> 57
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<210> 58
<211> 23
<212> DNA
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<220>
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<400> 58
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<210> 59
<211> 23

<212> DNA
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 <400> 59
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 <210> 60
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 <400> 60
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 <210> 61
 <211> 24
 <212> DNA
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 <400> 61
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 <210> 62
 <211> 24
 <212> DNA
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 <400> 62
 acgtttgata tccacttgg tccc 24

 <210> 63
 <211> 24
 <212> DNA
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 <220>
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 <223>Degenerate Jkappa reverse primer useful for
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<400> 63
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<210> 64
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<212> DNA
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amplifying human VL domains

<400> 64
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24

<210> 65
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<212> DNA
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amplifying human VL domains

<400> 65
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<210> 66
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<212> DNA
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<400> 66
cagcttgccc tgactcagcc tgc
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<210> 67
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<212> DNA
<213> Artificial Sequence

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amplifying human VL domains

<400> 67
tcctatgtgc tgactcagcc acc
23

<210> 68
<211> 23
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<213> Artificial Sequence

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<220>
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<400> 68
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<210> 69
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 <212> DNA
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<220>
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<400> 69
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<210> 70
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 70
 caggctgtgc tcaactagcc gtc 23

<210> 71
 <211> 23
 <212> DNA
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<220>
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<400> 71
 aattttatgc tgactcagcc cca 23

<210> 72
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <221>turn
 <223>Linker peptide that may be used to join VH
 and VL domains in an scFv.

<400> 72
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
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